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a floodplain management newsletter

Volume 34

December 1988

Controversy over irrigation diversions in Missoula

This summer the state has experienced some of the lowest flows ever recorded on many Montana streams. Irrigation companies have been forced to take drastic steps to get water. In and around the city of Missoula, three water users built diversion structures across the Clark Fork River. They felt that no permits were necessary because, to them, this was annual maintenance. The Missoula County Conservation District and the Missoula Office of Community Development felt differently. The city considered the irrigation companies to be in violation of the floodplain and streambank protection regulations, and they did not consider the projects to be merely annual maintenance. The county asked the Attorney General for an opinion on the definition of maintenance. The Attorney General, in turn, relied on the Webster Dictionary definition of maintenance. The diversion work created an obstruction where none existed before. In his opinion, "The construction of a diversion dike with heavy equipment requires either a 310 permit or an approved operation plan under the National Streambed and Land Preservation Act of 1975. When this work is performed within a designated floodplain or floodway, the construction additionally requires a (floodplain development) permit from the responsible political subdivision".

The county persuaded two of the irrigation companies to apply for floodplain and streambank protection permits. The irrigation companies also agreed to remove the diversion structures. Although the diversions have not yet been removed, the



Diversion structure built by the Frenchtown Irrigation Company during the summer of 1988.

county is confident the problems will be resolved.

The third irrigation company refused to respond to the county's request that they apply for a permit. It appears they want to challenge the regulations. This violation may end up in court.

It is suggested that floodplain administrators obtain an operation plan or

require a permit for activities that deviate from actual maintenance. Increasing the size or changing the configuration of a diversion structure constitutes an alteration and a floodplain development permit is required. An operating plan should address what the irrigation company will do in extreme years such as 1988. The plan should be detailed enough to cover any foreseeable problems.

Montana Department of Natural Resources and Conservation

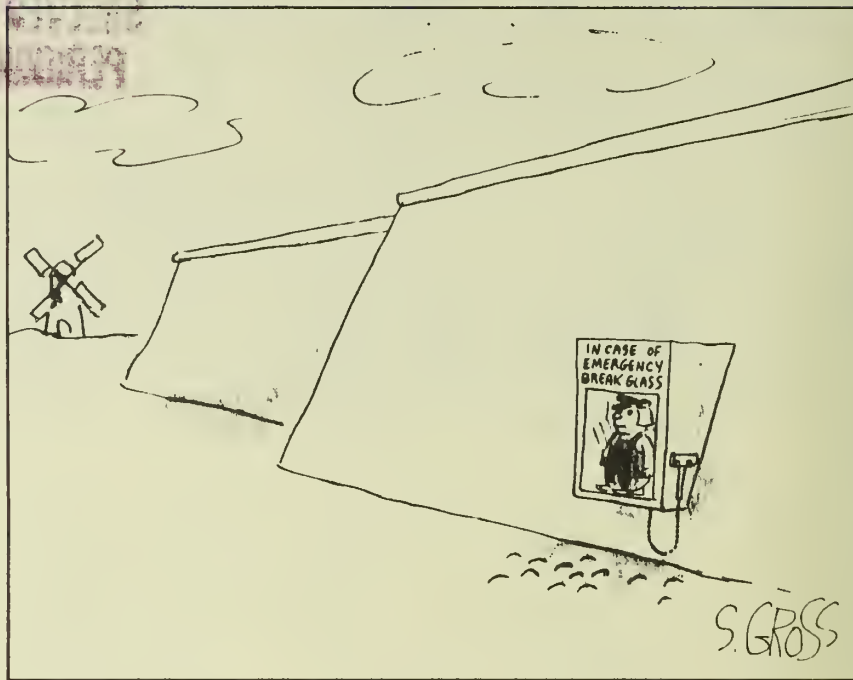
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Revising the floodplain administrative rules

Several issues have come up within the last year that call for a revision of the Administrative Rules of Montana for Floodplain Management. These rules provide guidance to the Floodplain Management Engineering Bureau for administering the state floodplain law.

The Floodplain Management Bureau is currently working on a draft set of rules. We plan on sending out a copy of the draft for comment from local floodplain administrators early in 1989. The Board of Natural Resources will then review the draft. Revisions will be made and the draft will then be published in the Montana Administrative Register for comments from the public. The rules will then go through a final revision. The Board of Natural Resources and Conservation must approve the final set of rules.

When you get a copy of the draft administrative rules we would appreciate hearing your comments on the changes made or suggestions for additional changes. A copy of the current administrative rules can be found in the Floodplain Management Guidebook for Local Administrators. If you already have ideas for changes please call or send us your ideas.



Water related permits

People often complain about the multitude of permits required for water related construction projects. But permits help to protect our water resources so they can be used and enjoyed equitably by everyone. Three of the more common permits are the Section 404, 310, and floodplain development permits.

Section 404 appears in the Federal Clean Water Act (33 U.S.C. 1344). Its purpose is to protect the waters of the United States. Section 404 permits are administered by the U.S. Army Corps of Engineers through the Omaha District for the State of Montana.

A person needs a Section 404 permit for any discharge of dredged or fill material placed into a stream or wetland. Upon receipt of an application for permit, the Corps issues a public notice of permit pending. Adjacent property owners, several state and federal agencies, and the county commissioners where the activity will occur receive a copy of the public notice. A comment period follows issuance of the notice. The public notice and comment period provide an excellent opportunity for local floodplain administrators to

determine if a floodplain development permit is needed. If you have not seen any public notices, be sure to check with your commissioners to see that you get them. The Corps will not grant a permit until all concerns are addressed by the applicant. In most cases, projects requiring a 404 permit also need a floodplain development permit.

The 310 permit derives its name from the Senate Bill for the Natural Streambed and Land Preservation Act of 1975. This bill requires a permit for any project within the ordinary highwater mark of a perennial stream. Permits are issued by the board of supervisors of local conservation districts. The policy behind this act is to preserve streams in their natural state and to minimize soil erosion and sedimentation.

While the 404 and 310 programs require permits for construction activities occurring within the banks of a stream, a floodplain development permit is needed for activities that may occur within a designated floodplain. The purpose of floodplain management is to restrict certain uses susceptible to flood damages, prevent flood hazards to life and property, and to limit expenditures for disaster relief and emergency services.

Variances

A variance is a waiver of the requirements of a floodplain management ordinance. A good rule of thumb is: variances should not be granted.

A variance represents a community's approval to set aside floodplain regulations that were adopted to reduce loss of life and property due to flood damages. While the impact of a single variance on flood hazards may not be significant, the cumulative impact of several variances may be severe.

Communities should have a consistent and fair policy to deal with variance requests. The DNRC model ordinance establishes a board of adjustment to act on variances. Rules adopted by the Board of Natural Resources and Conservation allow

that variances may be granted only if:

- there is a showing of good and sufficient cause;
- refusal to grant a variance would result in unique or undue hardship on the applicant or community involved;
- the variance will not result in increased flood hazard elsewhere;
- a reasonable location outside the floodplain is not available;
- the proposed use would be adequately flood-proofed; and
- approval of the Department of Natural Resources and Conservation is obtained prior to approving any variance.

The first step in review is to prepare a list of findings of fact that each and every one

of the aforementioned conditions are met. If all conditions are met and local officials favor the request, then approval from DNRC is requested. A committee within DNRC considers such requests. The committee will deny any request that cannot meet these conditions.

It is important to remember that financial constraints do not constitute a hardship on the applicant. A hardship consists of physical features of the property whereby the requirements for floodproofing cannot be met. An example would be where the 15-foot fill requirement around a new house cannot be met because the lot size is too small.

It is essential to thoroughly document the variance review and approval process. When the Board's standards and NFIP requirements are not enforced, a community risks its eligibility to participate in the NFIP.

Forest fires and flooding

This fall the Carbon County News reported that post-fire conditions in and around Yellowstone National Park might "significantly reduce" flows in the Clark's Fork of the Yellowstone next summer. But an Associated Press story in the Helena Independent Record noted quite different conditions on the North Fork of the Sun River downstream from last summer's Gates Park fire. The North Fork reportedly rose two feet after a heavy rain and was "as dirty as during a spring flood."

Do forest fires lead to lower or higher runoff flows? What should people downstream from burned watersheds expect for runoff in the spring of 1989? According to researchers, both stories are likely to be repeated in watersheds and newspapers across the state next summer.

Kevin Ryan, fire effects researcher at the USFS Intermountain Fire Sciences Lab in Missoula, explains, "The potentials for higher runoff vary considerably from one area to the next. The runoff response in a burn is very dependent upon what type of precipitation event you get. If a hard rain hits before the soil can stabilize, then erosion and runoff can be severe."

Such a rapid chain of events is what caused the high flows and sediment loads in the Sun River. Too much sediment in a stream adds force to the water and reduces the channel's ability to carry the flows.

Ryan pointed out that the potential for regrowth in the burned area is critical for erosion control, particularly if new vegetation can take hold under the winter's snowpack. "If there was a good perennial grass before the fire, regrowth over winter should stabilize the soil considerably," he said. Most of Montana's burned soils were producing green shoots by early fall, and the higher elevations are already blanketed with snow.

Hydrologist Chuck Parrett, with the U.S. Geological Survey in Helena, agrees with Ryan and adds that "the actual area that burned intensely in Montana is small." The intensity of the fire is important, he said, because only a severe fire will harden the soil enough to make it water repellent, leading to higher runoff. "Our early snowfall gave the soils a good shot of precip, dissipating the repellency factor," he said. In most places, the initial runoff has been moderate, with low levels of erosion even in the burned areas.

Parrett, who studied the debris flow and flood that followed the North Hills fire north of Helena in 1984, feels that flooding problems due to post-fire conditions will be unlikely next spring. Still, fire and water mix in unpredictable ways. "If a fire is followed by a big rain," he said, "it's hard to sort out how much flooding is due to the fire conditions and

how much is due to the precipitation that triggered the event." Parrett also cautions that an intense rainfall on severely burned soils could produce a freak flood. He noted that the northwest corner of the state is particularly susceptible because of the heavy snowpack common there. "A warming trend and even rain mid-winter could wash out a burn up there," he said. "Remember, the flood of record around Libby was in January 1974."

Adding to the unpredictability is the loss of the tree canopy in some watersheds. Without the canopy, where snow often accumulates and evaporates before it can fall to the ground, the snow should be deeper than normal, given a normal snowfall. The Soil Conservation Service also lost several monitoring stations that had recorded snowpack for two or three decades. Without the monitors, the unfamiliar snowpack will make it difficult to forecast any subsequent runoff.

In sum, last summer's fires aren't likely to contribute to any major flooding through the upcoming runoff season. However, locally hardened or barren soils could be prone to high runoff and erosion under the initial snowmelt. These areas may not retain the moisture available and late-summer low flows could result. Even as the old burns grow back, the weather will remain the most important factor influencing next year's highwater marks.

New toll-free number for flood maps

There is a new toll-free number that connects directly to the Flood Map Distribution Center in Baltimore, Maryland. The new number is **1-800-333-1363** and the center is open from 8 A.M. to 8 P.M. Eastern Standard Time, Monday through Friday. Flood Insurance Rate Maps and Flood Hazard Boundary Maps are available through this number. If you want to order Floodway maps you must specifically request them.

Maps are still free to government agencies, insurance agents, or lenders. There is a charge when maps are ordered by landowners, realtors, or developers.

You may order individual maps or maps for an entire city or county. Written map orders should be sent to:

Federal Emergency Management Agency
Federal Map Distribution Center
6930 (A-F) San Thomas Road
Baltimore, MD 21227-6227

Floodplain Management Section Staff:

John Hamill, Supervisor

Deeda Richard, Floodplain Community
Assistance Coordinator
and Newsletter Editor

Phone: (406) 444-6646/6654/6655

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**Floodplain Management Section
Montana Department of Natural
Resources and Conservation**

**1520 East Sixth Avenue
Helena, MT 59620-2301**